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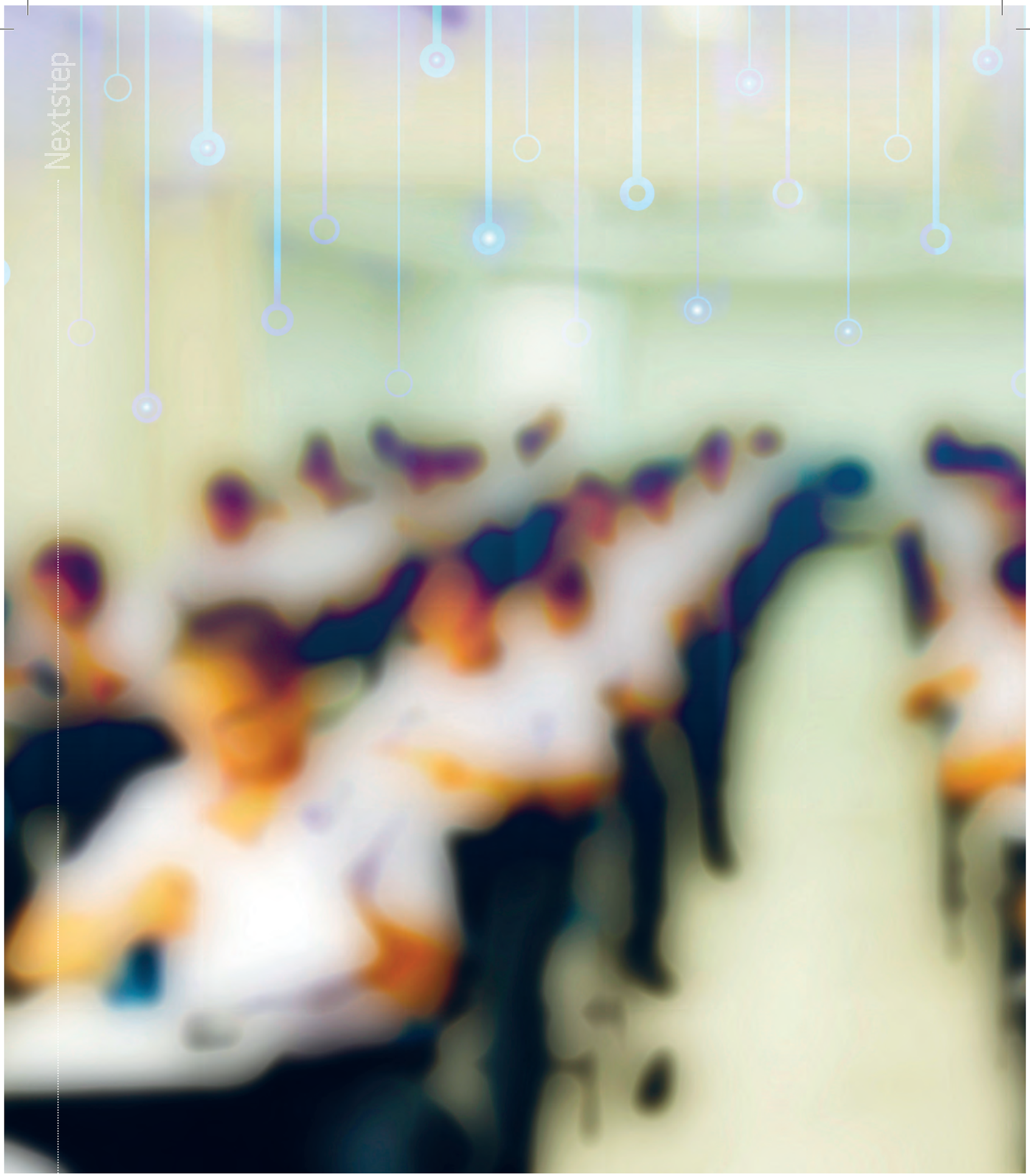

Using Education Technology In Simple Ways To Improve Assessment

| By Dr Shelley Kinash |

If I had to nominate one learning experience as the best across each of my primary and secondary schooling, the first example would be from my Year 9 Law class. One day, the principal came into our classroom. His face was red and he was frowning. He took Dwayne, one of the boys in my grade, out of the room. Dwayne was often in trouble, so this was not surprising, but the physical interaction was confronting. The teacher said, "Everyone, quick, pull a piece of paper out of your notebooks and describe what you just saw. This is important." We did so and handed them in. The energy in the room was electric and the rumour mill was rampant. A number of students were sure what Dwayne had done this time and it was *bad*. But then the principal and Dwayne came back into the room together and they were laughing. The teacher shared that he had set up the situation to teach us about the process and challenges of witnessing. The teacher read out a number of the descriptions. Most used verbs like *grabbed*, *squeezed* and *yanked* and judgements like *brutal, mean* and *unfair*. The teacher asked us to recall whether the principal actually *yanked* Dwayne and, based on what we saw, could we actually call the action *brutal*. I have never forgotten this learning experience and use the memory as a check to keep me honest whenever I am called to describe an experience – which is a common and transferable skill.

I can also easily nominate a single learning experience from across higher education. This was in a Communications class in my undergraduate degree. We were learning about technical writing and this unit was on proposals. The city in which I was living hosted the headquarters of many of the top oil companies. Rather than marking our proposals herself, our professor submitted them to a group of top executives from among these oil companies. We wrote the proposals as bids to these oil companies to secure our services. The executives then selected which proposal they would choose and thereby whose fictitious consulting company would win the bid. A large part of why I remember this exercise must certainly be because my proposal was selected. This was meaningful and treasured feedback because it came from industry. The reason *why* mine was selected has had lasting impact. The executives said that what made my proposal stand out was that I personalised it with faces and personality. I specified, by name (albeit fictitious), who I would assign to the job and why they were good fits for this company and work. I have remembered this feedback. I have since been successful at being awarded multiple research grants. I believe that one of the reasons is that I go beyond stating details such as that I will hire a project manager, to giving the name and describing her prior experience and suitability for this research.

Both of these experiences were about authentic assessment. Notably, of the many educational experiences I could have recalled when considering the pinnacles of my learning across my schooling, the two that stood out were both assessment. *Assessment* can be simply defined as the work that students produce to apply their learning and/or demonstrate their subject mastery. David Boud, an educational expert, has famously said, "Students can survive bad teaching, but NOT bad assessment."

There are five main principles that can be drawn from across the two learning experiences I shared. These are discussed below, along with education technologies that can be used to apply them. There are two common themes across these principles. First, assessment and learning are two sides of the same coin and inseparable. Second, there is a future orientation. While assessment matters to the student in the here-and-now of schooling, it is also framed so that it sets them up for future successes in their careers and lifelong learning.

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1. Good assessment is compelling, rich and memorable, and can be transferred beyond schooling to inform lifelong application.

There are times when the educator has control over the assessment activities and times when the educator must run students through what has been prescribed. For example, teachers have no choice when it comes to standardised state or national tests. In university, tutors usually have to use the assessment that professors have listed in the subject outline. However, educators can be creative within these boundaries. For example, in supporting students to prepare for high-stakes tests, a quick Google search will reveal many online tests for practice. Choose some just-for-fun tests to playfully practise the skills of reading between the lines of questions. Use a Boyfriend-Girlfriend test and see if students can manipulate the outcome by answering the questions in certain ways. On a more serious note, choose a higher stakes test in the discipline of study. For example, biology students can try online versions of the Medical College Admission Test (MCAT) and discuss how to make it through all of the questions in the allotted time. Education technology can also be used to engage industry experts in assessment. Help students find active discipline-relevant online forums and engage in conversations with industry experts. Encourage them to start Twitter accounts and follow key industry personnel. Have them report back on their findings. Start discussion forums and invite industry executives in for relevant online conversations.

2. Students are provided with meaningful and specific feedback that can be applied to future learning.

Technology has enabled feedback opportunities that were not previously available. Ask students to submit electronic drafts of their papers. Specific and meaningful feedback can be easily provided using comments and Track Changes in programs such as Word. Students can see where a teacher has crossed out or inserted text. Consider having students peer-review each other's submissions using these tools. Invite graduates and/or industry experts to occasionally review papers. Numerous rubric creation tools are also now available online. These tools help teachers to explicitly articulate the components of an assessment submission, aligned with various grades. The rubric can be provided alongside the assignment and then handed back with the marked-up drafts, with the relevant quadrants on the rubric highlighted. Some educators have creatively used rubrics in designing them together with the students, so that there is co-ownership of the expectations.

3. Assessment is relevant and students perceive assessment as relevant to current and career learning.

Why is the assessment what it is? Why was that mode chosen? Why was that knowledge and were those skills and attributes assessed as opposed to others? How does this subject or unit fit together with the other subjects or units for this school year or course/degree? The educator is well-placed to ask this question in relation to each assessment task and then work through the answers with the students. There are some education technologies that can help. For example, if using a learning management system, analytics tools are readily available to see what assessment modes are being used across the curriculum and which learning outcomes are being assessed. There are a growing number of curriculum mapping and assuring learning tools available online to derive a bigger picture of how assessment works together. One of the specific, and simple, actions an educator can take is to guide the students to research the activities and type of work that people in relevant and related careers undertake. What kinds of reports do scientists write? How do they gather their data? What kinds of communications do engineers engage in? What makes these communications most effective? The internet is a powerful resource to find this information, as profiles of professionals and work artefacts can be readily located. Invite conversation about the relevance of the current assessment. Which specific and transferable skills can be learned through this school-based assessment that can be applied later?

4. Assessment is not a bolt-on or afterthought; it is woven into the fabric of the learning experience.

Assessment has mnemonic properties. It tends to stick in people's long-term memory because it has an emotional element. Denise Jackson wrote about the educational shift from 'inquisitive' to 'acquisitive' learners. Educators have all had frequent encounters with students who want to know whether 'it is on the test' because if it is not, then they do not want to bother learning it. John Biggs wrote about the importance of 'constructive alignment' whereby educators must ensure that what they design as learning outcomes of the experience are closely married to the assessment activities. For all of these reasons, assessment *is* learning and for students, learning is about assessment. Education cannot be considered a two-step dance where first educators teach it and then they assess it. As written above, *learning* and *assessment* are stamped on either side of the coin and cannot be separated. One way of using education technology to help make the connection between learning and assessment relevant to students is through the use of visual mind mapping software. Work together with students to create a visual map of the semester and beyond. Plot the learning outcomes, the assessment and their career goals, showing and reflecting on the relationships between these elements.

Technology has enabled feedback opportunities that were not previously available.

5. Students are taught how to master the type of assessment and how to apply these skills to activity beyond the classroom.

The power of the Year 9 Law experience in which we were directed to describe what we saw was that we learned observation/witness skills through experience. Writing clear, factual notes is a transferable assessment activity that is used throughout and across multiple domains of life. The lessons that we learned through this activity are lasting. Royce Sadler writes that relying too heavily on feedback means that the educational intervention is often too late. He asks educators to consider how many times they have been confronted by students who are confused that they did not receive a high distinction on an assessment task because they had spit back every fact that the educator had taught them about a subject matter. The educator often replies with, "But you did not answer the question" or "But you did not demonstrate critical thinking". Educators must always be clear with students about their expectations. Do the students know how to differentiate between the unique types of assessment and are they able to fulfill the criteria for each? The internet is a valuable source of artefacts to accomplish this task. At the time of assigning a piece of assessment, consider having a reflective conversation with students about the mode or genre of assessment and the accompanying expectations. Ask the students to take out their mobile devices and find examples of artefacts written in that mode. Which ones are exemplars? Why? Which ones would be exemplars for a different type of assessment, but not for this task?

Conclusion

Applied use of education technology can vastly improve the quality of the student assessment experience and thereby improve learning. For further principles and ideas of how to improve assessment, the following authors are recommended. Each of these authors has a website and multiple books and articles. John Biggs writes about constructive alignment. David Boud writes about authentic assessment, feedback and quality standards. Royce Sadler writes about teaching students about assessment genre. ETS

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